

Work Order ID 88073

July-24-12 1:43:08 PM

88073

Page 1

Item ID: D3272-1

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Step

Stop

NS2

Start Date: 7/24/12 Start Qty: 10.00 *10*

Required Date: 8/17/12 Req'd Qty: 10.00 *10*

Cust Item ID:

Customer:

Reference:

Approvals:

Process Plan:

H

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
D3272	Rev B

100

100

Large Fab

0.00

(10)

Ø

Ae
12.08.09

Large Fab

Memo

0.00

SQUARE ONE END BEFORE CUTTING OTHER END

1-Cut D2622-120 extrusion to 116.25" long as per Dwg D3272 using cutting table setup DT 8185-2A

2-Drill extrusion as per Dwg D3272 using Jig DT8680 for rivets.

3-Deburr

110

110

0.00

(DAS
16
9.02) D10815

(10)

0.00

QC6- Inspect dimensions to drawing

Memo

Quality Control

NCR: Yes / No

DQA: Date:

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending				Bend				Grain			
Centre Not Concentric to O/S				BOM/Route				Hardware			
Cracks				Broken/Damaged				Inspection Incomplete			
Crushed/Crimped.				Burrs				Instructions Incomplete/Unclear			
Cuffs				Contamination				Maintenance			
Heat Treat				Countersink				Mislabeled			
Inspection Strip in Tube				Cut Too Short				Misread			
Ripples in Bend				Drill Holes				Offset			
Torque Waves in Extrusion				Drawing				Out of Calibration			
Turning Sequence				Finish				Out of Sequence			
Wave/Twist in Tube				Folio				Outside Dimensions			
Ovalized											
Over/Under tolerance											
Part Incorrect											
Part Lost/Missing											
Part Moved											
Positioned Wrong											
Power Loss/Surge											
Pressure/Forced											
Temperature/Cure											
Weld											
Wrong Stock Pulled											
Other											

Work Order ID 88073

July-24-12 1:43:08 PM

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Page 2

Item ID: D3272-1

Accept

N900040100

Setup

Start

NS1

Revision ID:

Item Name: Step

Stop

NS2

Start Date: 7/24/12 Start Qty: 10.00

10

Cust Item ID:

Required Date: 8/17/12 Req'd Qty: 10.00

10

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run

Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

120

Identify as per dwg & Stock Location: MF

0.00

10

0

K
12.08.15

120

Packaging

Packaging

Memo

0.00

130

QC21- Final Inspection - Work Order Release

0.00

MLJ 12/08/17

130

QC

Quality Control

Memo

0.00

MF
12.08.16

NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION <input type="checkbox"/> Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update		AGAINST DEPARTMENT/PROCESS <input type="checkbox"/> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other						
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance		Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector
Doc/Data										
Equip/Tooling										
Operator										
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Setup										
Other										
Process										
Supplier										
Training										
Unapproved										
FAULT CATEGORY										
Landing Gear	General									
	<input type="checkbox"/> Bending	<input type="checkbox"/> Bend	<input type="checkbox"/> Grain	<input type="checkbox"/> Ovalized	<input type="checkbox"/> Pressure/Forced					
	<input type="checkbox"/> Centre Not Concentric to O/S	<input type="checkbox"/> BOM/Route	<input type="checkbox"/> Hardware	<input type="checkbox"/> Over/Under tolerance	<input type="checkbox"/> Temperature/Cure					
	<input type="checkbox"/> Cracks	<input type="checkbox"/> Broken/Damaged	<input type="checkbox"/> Inspection Incomplete	<input type="checkbox"/> Part Incorrect	<input type="checkbox"/> Weld					
	<input type="checkbox"/> Crushed/Crimped.	<input type="checkbox"/> Burrs	<input type="checkbox"/> Instructions Incomplete/Unclear	<input type="checkbox"/> Part Lost/Missing	<input type="checkbox"/> Wrong Stock Pulled					
	<input type="checkbox"/> Cuffs	<input type="checkbox"/> Contamination	<input type="checkbox"/> Maintenance	<input type="checkbox"/> Part Moved	<input type="checkbox"/> Other					
	<input type="checkbox"/> Heat Treat	<input type="checkbox"/> Countersink	<input type="checkbox"/> Mislabeled	<input type="checkbox"/> Positioned Wrong						
	<input type="checkbox"/> Inspection Strip in Tube	<input type="checkbox"/> Cut Too Short	<input type="checkbox"/> Misread	<input type="checkbox"/> Power Loss/Surge						
	<input type="checkbox"/> Ripples in Bend	<input type="checkbox"/> Drill Holes	<input type="checkbox"/> Offset							
	<input type="checkbox"/> Torque Waves in Extrusion	<input type="checkbox"/> Drawing	<input type="checkbox"/> Out of Calibration							
	<input type="checkbox"/> Turning Sequence	<input type="checkbox"/> Finish	<input type="checkbox"/> Out of Sequence							
	<input type="checkbox"/> Wave/Twist in Tube	<input type="checkbox"/> Folio	<input type="checkbox"/> Outside Dimensions							

Picklist Print

July-24-12 1:43:08 PM

Page 1

Work Order ID: 88073

Parent Item: D3272-1

Parent Item Name: Step

Start Date: 7/24/12

Required Date: 8/17/12

Start Qty: 10.00

Required Qty: 10.00

Comments: IPP Rev:A New Issue 07-06-09 JLM

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2622-120C Step Extrusion		Manufactured	No			100	Each	95.8900	1	10			
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NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order:		DISPOSITION			AGAINST DEPARTMENT/PROCESS						
		Rework	<input type="checkbox"/>	Skid-tube	<input type="checkbox"/>	Crosstube	<input type="checkbox"/>	Water Jet	<input type="checkbox"/>	Engineering	<input type="checkbox"/>
		Scrap	<input type="checkbox"/>	Machining	<input type="checkbox"/>	Small Fab	<input type="checkbox"/>	Prod. Eng. Coor.	<input type="checkbox"/>	Quality	<input type="checkbox"/>
		Use-as-is	<input type="checkbox"/>	Thermoforming	<input type="checkbox"/>	Finishing	<input type="checkbox"/>	Rec/Store/Packaging	<input type="checkbox"/>	Other	<input type="checkbox"/>
		Work Order Update	<input type="checkbox"/>	Large Fab	<input type="checkbox"/>	Composite	<input type="checkbox"/>	Supplier	<input type="checkbox"/>		
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio		<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Other	

DART

DESIGN <i>QP</i>	DRAWN BY <i>JB</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>CE</i>	APPROVED <i>HF</i>	DRAWING NO. D3272	REV. B SHEET 1 OF 3
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG	SCALE NTS
A	04.03.01	NEW ISSUE	
B	07.05.18	D3272-1 WAS D2622-120	

RELEASED07.06.04 *HF*

QTY -041	QTY -042	PART NUMBER	DESCRIPTION
X		D3272-041	STEP ASSEMBLY, HIGH LONG (LH)
	X	D3272-042	STEP ASSEMBLY, HIGH LONG (RH)
1	1	D3065-041	LEG ASSEMBLY
2	2	D3066-1	SPACER
2	2	D3067-1	END PLATE
2	2	D3219-1	SUPPORT
1	1	D3272-1	STEP
16	16	MS20600AD4W4	RIVET

**GENERAL NOTES:**

- 1) D3272-041 SHOWN. FOR D3272-042, INSTALL D3219-1 SUPPORT OPPOSITE SIDE
- 2) WELD PER DART QSI 004
- 3) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005.4.1
POWDER COAT ASSEMBLY WHITE (4.3.5.1) PER DART QSI 005 4.3
BLACK ANTI-SKID PAINT PER DART QSI 005 4.4
- 4) TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
- 5) ALL DIMENSIONS ARE IN INCHES UNLESS OTHERWISE NOTED.
- 6) BREAK ALL SHARP EDGES 0.005 TO 0.010 MAX.

Step Assembly
3

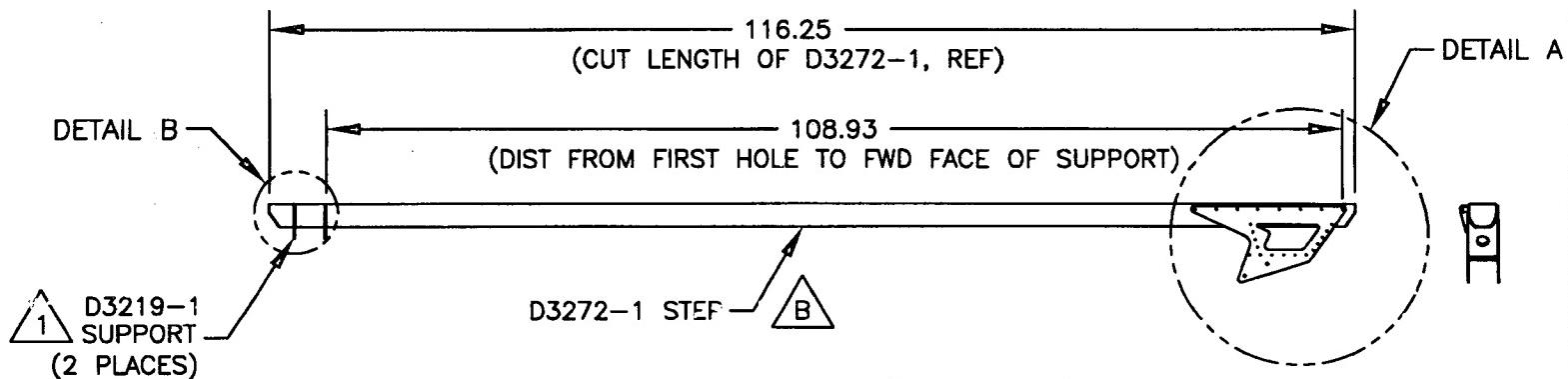
NCR: Yes / No

DQA: Date:

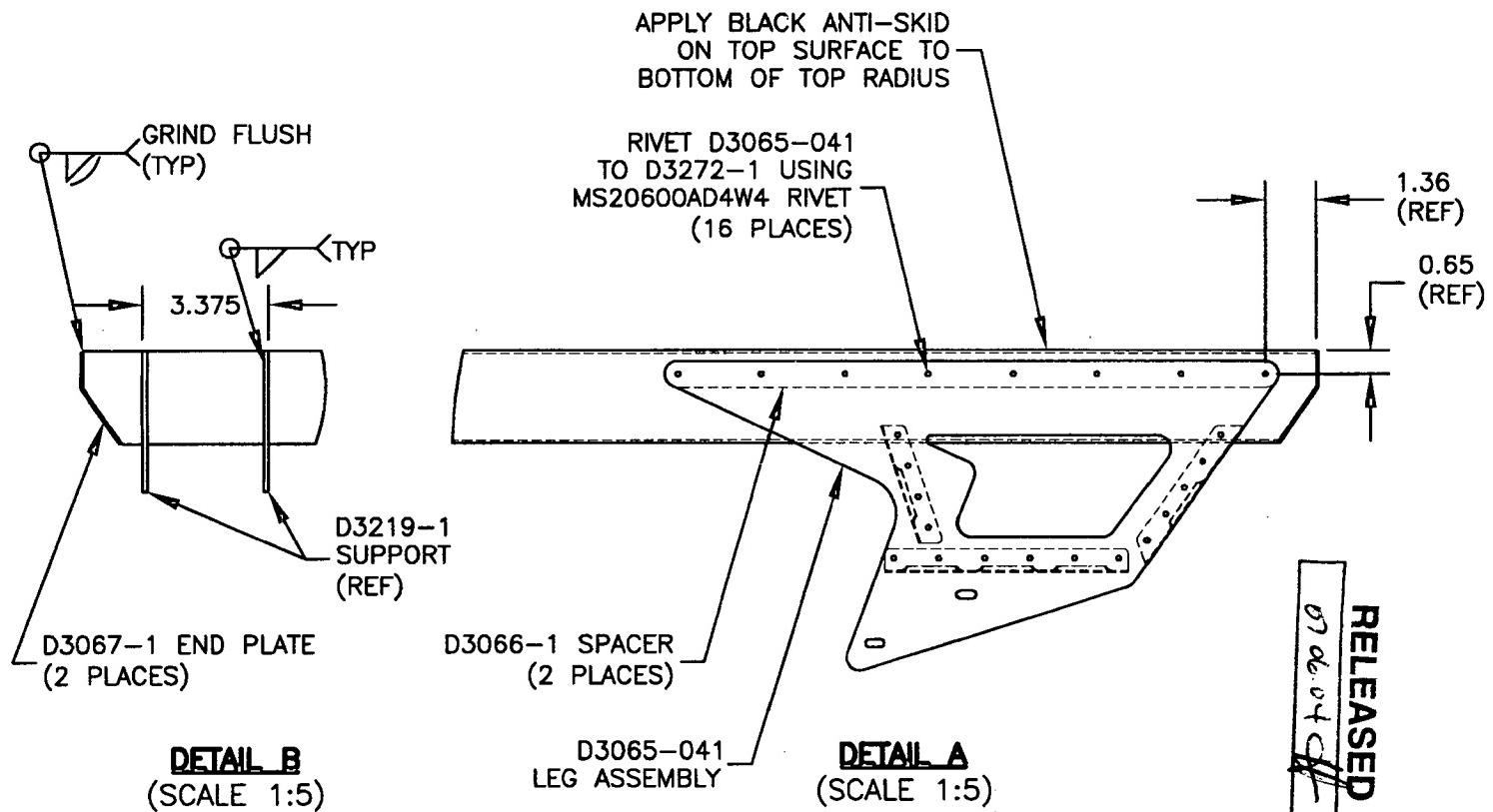
WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data											
Equip/Tooling											
Operator											
Material											
Setup											
Other											
Process											
Supplier											
Training											
Unapproved											
FAULT CATEGORY											
Landing Gear				General							
Bending				Bend <input type="checkbox"/>	Grain <input type="checkbox"/>	Ovalized <input type="checkbox"/>	Pressure/Forced <input type="checkbox"/>				
Centre Not Concentric to O/S				BOM/Route <input type="checkbox"/>	Hardware <input type="checkbox"/>	Over/Under tolerance <input type="checkbox"/>	Temperature/Cure <input type="checkbox"/>				
Cracks				Broken/Damaged <input type="checkbox"/>	Inspection Incomplete <input type="checkbox"/>	Part Incorrect <input type="checkbox"/>	Weld <input type="checkbox"/>				
Crushed/Crimped.				Burrs <input type="checkbox"/>	Instructions Incomplete/Unclear <input type="checkbox"/>	Part Lost/Missing <input type="checkbox"/>	Wrong Stock Pulled <input type="checkbox"/>				
Cuffs				Contamination <input type="checkbox"/>	Maintenance <input type="checkbox"/>	Part Moved <input type="checkbox"/>					
Heat Treat				Countersink <input type="checkbox"/>	Mislabeled <input type="checkbox"/>	Positioned Wrong <input type="checkbox"/>					
Inspection Strip in Tube				Cut Too Short <input type="checkbox"/>	Misread <input type="checkbox"/>	Power Loss/Surge <input type="checkbox"/>					
Ripples in Bend				Drill Holes <input type="checkbox"/>	Offset <input type="checkbox"/>	Other <input type="checkbox"/>					
Torque Waves in Extrusion				Drawing <input type="checkbox"/>	Out of Calibration <input type="checkbox"/>						
Turning Sequence				Finish <input type="checkbox"/>	Out of Sequence <input type="checkbox"/>						
Wave/Twist in Tube				Folio <input type="checkbox"/>	Outside Dimensions <input type="checkbox"/>						



D3272-041 STEP ASSEMBLY (LH. SHOWN)
D3272-042 STEP ASSEMBLY (RH, OPPOSITE)



DESIGN	DRAWN BY	DART AEROSPACE LTD
99	<i>[Signature]</i>	HAWKESBURY, ONTARIO, CANADA
CHECKED	APPROVED	DRAWING NO.
<i>[Signature]</i>	<i>[Signature]</i>	D3272
DATE		SHEET 2 OF 3
07.05.18		SCALE
		1:20

RELEASED
[Signature]

DART

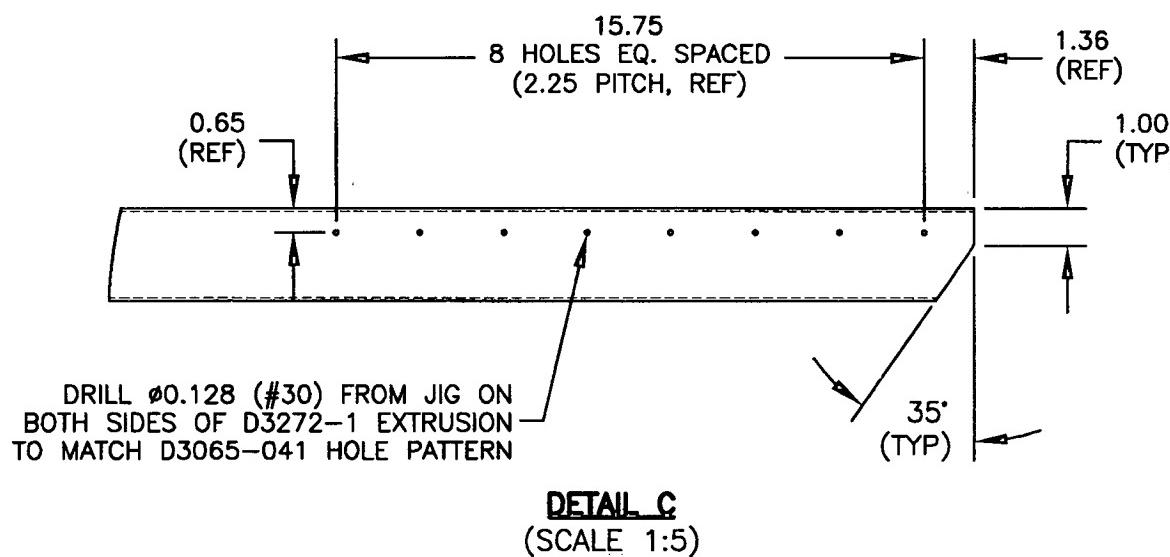
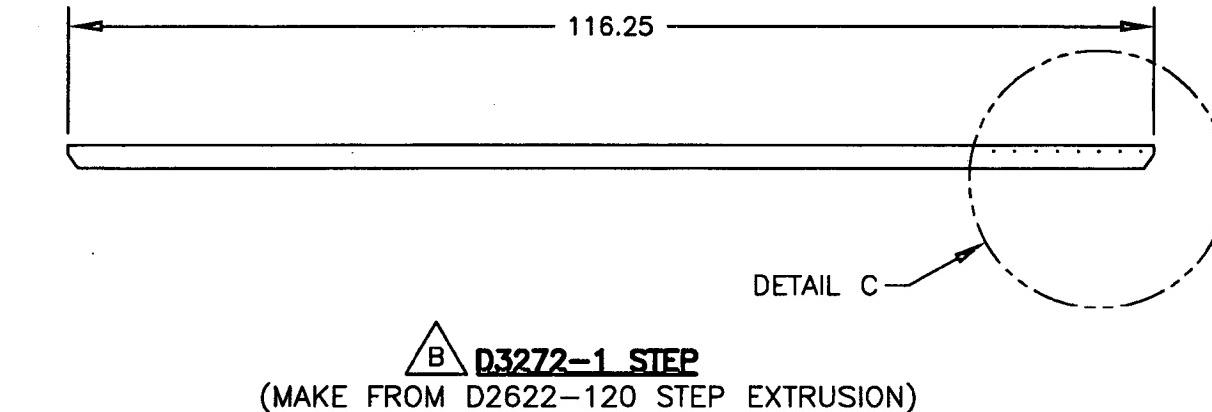
NCR: Yes / No

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order: _____			DISPOSITION			AGAINST DEPARTMENT/PROCESS					
			Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>	Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/>	Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/>	Water Jet <input type="checkbox"/> Prod. Eng. Coor. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/>	Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/>				
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Doc/Data <input type="checkbox"/> Equip/Tooling <input type="checkbox"/> Operator <input type="checkbox"/> Material <input type="checkbox"/> Setup <input type="checkbox"/> Other <input type="checkbox"/> Process <input type="checkbox"/> Supplier <input type="checkbox"/> Training <input type="checkbox"/> Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube				General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio <input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions							
				<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>							
				<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other							



RELEASED
07/06/04

DESIGN <i>99</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D3272
DATE 07.05.18		TITLE STEP ASSEMBLY, HI LONG
		REV. B SHEET 3 OF 3 SCALE 1:20



NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: Date:

QA Closed: Date:

Work Order: _____				DISPOSITION		AGAINST DEPARTMENT/PROCESS					
				Rework Scrap Use-as-is Work Order Update	Skid-tube Machining Thermoforming Large Fab	Crosstube Small Fab Finishing Composite	Water Jet Prod. Eng. Coor. Rec/Store/Packaging Supplier	Engineering Quality Other			
Part No. _____											
NCR No. _____											
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
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Process											
Supplier											
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Unapproved											
FAULT CATEGORY											
Landing Gear	General										
	Bending	Bend	Grain	Ovalized	Pressure/Forced						
	Centre Not Concentric to O/S	BOM/Route	Hardware	Over/Under tolerance	Temperature/Cure						
	Cracks	Broken/Damaged	Inspection Incomplete	Part Incorrect	Weld						
	Crushed/Crimped.	Burrs	Instructions Incomplete/Unclear	Part Lost/Missing	Wrong Stock Pulled						
	Cuffs	Contamination	Maintenance	Part Moved							
	Heat Treat	Countersink	Mislabeled	Positioned Wrong							
	Inspection Strip in Tube	Cut Too Short	Misread	Power Loss/Surge							
	Ripples in Bend	Drill Holes	Offset								
	Torque Waves in Extrusion	Drawing	Out of Calibration								
	Turning Sequence	Finish	Out of Sequence								
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